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- Published:
— with international search report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: FLUORESCENT COMPOSITIONS COMPRISING DIKETOPYRROLOPYRROLES

(57) Abstract: The present invention relates to compositions comprising a guest chromophore and a host chromophore, wherein the absorption spectrum of the guest chromophore overlaps with the fluorescence emission spectrum of the host chromophore, wherein the host chromophore is a diketopyrrolopyrrole having an absorption peak at 500 to 720 nm, preferably 500 to 600 nm, most preferred 520 to 580 nm and wherein the guest chromophore is a diketopyrrolopyrrole having an absorption peak at 500 to 720 nm, preferably 500 to 600 nm, most preferred 520 to 580 nm and their use for the preparation of inks, colorants, pigmented plastics for coatings, non-impact-printing material, color filters, cosmetics, polymeric ink particles, toners, dye lasers and electroluminescent devices. A luminescent device comprising a composition according to the present invention is high in the efficiency of electrical energy utilisation and high in luminance.

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/00650

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C09K11/06 H05B33/14 H01L51/20 C07D487/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C09K H05B H01L C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data, COMPENDEX, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 969 154 A (TEBALDI NANCY ET AL) 19 October 1999 (1999-10-19) column 7, line 59 -column 8, line 16 column 1, line 1 -column 7, line 55 examples	1-5, 12
A	EP 0 499 011 A (JAPAT LTD) 19 August 1992 (1992-08-19) the whole document	1-11
X	example 7	12

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Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents:

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

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O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

26 March 2003

Date of mailing of the international search report

03/04/2003

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/00650

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1 087 006 A (CIBA SC HOLDING AG) 28 March 2001 (2001-03-28) cited in the application page 3, line 1 -page 4, line 24 page 5, line 21-24 page 9, line 58 -page 12, line 30 page 17, line 34-42 table 7 ----	1-5,8-12
X	EP 1 087 005 A (CIBA SC HOLDING AG) 28 March 2001 (2001-03-28) cited in the application page 3, line 1 -page 5, line 50 page 13, line 26-28 claims 1,4,5,7 ----	1-12
X	EP 1 078 970 A (CIBA SC HOLDING AG) 28 February 2001 (2001-02-28) page 3, line 1-57 page 8, line 18-30 ----	1-5,8,9, 12
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X	----	12
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X	US 4 585 878 A (JOST MAX ET AL) 29 April 1986 (1986-04-29) the whole document -----	12

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-11

First group of inventions

Composition comprising two different diketopyrrolopyrroles (guest and host chromophore) in the way, that the absorption spectrum of the guest chromophore overlaps with the emission spectrum of the host chromophore.

1.1. Claim : 12

Second group of inventions

Only one diketopyrrolopyrrole.

Please note that all inventions mentioned under item 1, although not necessarily linked by a common inventive concept, could be searched without effort justifying an additional fee.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP 03/00650

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/00650

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